

ENERGY STAR® Qualified Appliance Savings Fact Sheets
Inputs

Inputs

[1] National Average Water Heating Breakdown

Percent electric water heating	41%
Percent gas water heating	59%

National Average Utility Rates

[2] Electric rate (\$/kWh)	0.0860
[2] Gas rate (\$/therm)	0.9100
[3] Water rate (\$/gallon)	0.0042

[4] Appliance Life Expectancies

Product Type	Years
Clothes washer	11
Dishwasher	10
Refrigerator	13
Freezer	11
Compact refrigerator	9
Room air conditioner	11
Dehumidifier	11

Average Annual Energy and Water Consumption for ENERGY STAR Qualified Appliances and Non-Qualified Appliances

	Product Type	kWh/year	therms/year	gallons/year	\$/year
	<i>Electric Water Heating</i>				
[5]	ENERGY STAR qualified clothes washer	243		7,405	52
	Non-qualified clothes washer	529		14,468	106
[6]	ENERGY STAR qualified dishwasher	341		1,075	34
	Non-qualified dishwasher	413		1,935	44
	<i>Gas Water Heating</i>				
[7]	ENERGY STAR qualified clothes washer	24	17	7,405	48
	Non-qualified clothes washer	53	29	14,468	91
[8]	ENERGY STAR qualified dishwasher	150	8	1,075	25
	Non-qualified dishwasher	182	11	1,935	34
[9]	<i>Weighted National Averages (59% gas, 41% electric)</i>				
	ENERGY STAR qualified clothes washer	114	10	7,405	50
	Non-qualified clothes washer	249	17	14,468	97
	ENERGY STAR qualified dishwasher	229	5	1,075	28
	Non-qualified dishwasher	277	6	1,935	38
[10]	ENERGY STAR qualified refrigerator	442			38
	Non-qualified refrigerator	520			45

ENERGY STAR® Qualified Appliance Savings Fact Sheets
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	Product Type	kWh/year	therms/year	gallons/year	\$/year
	10-year-old refrigerator (model produced before 1993)	821			71
[11]	ENERGY STAR qualified freezer	400			34
	Non-qualified freezer	444			38
	10-year-old freezer (model produced before 1993)	590			51
[12]	ENERGY STAR qualified compact refrigerator	297			26
	Non-qualified compact refrigerator	371			32
[13]	ENERGY STAR qualified room air conditioner	681			59
	Non-qualified room air conditioner	754			65
	10-year-old room air conditioner	838			72
[14]	ENERGY STAR qualified dehumidifier	2,161			186
	Non-qualified dehumidifier	2,378			204

Sources and Assumptions

[1]	2001 Residential Energy Consumption Survey (RECS).
[2]	U.S. Department of Energy (DOE).
[3]	2002 Raftelis Water and Wastewater Rate Survey.
[4]	2004 Appliance Magazine's Portrait of the U.S. Appliance Industry.
[5]	D&R International.
[6]	D&R International.
[7]	D&R International.
[8]	D&R International.
[9]	Assumes nationally weighted water heating averages for clothes washer and dishwasher energy consumption.
[10]	ENERGY STAR estimate from D&R International. Non-qualified estimates from 2003 AHAM Fact Book.
[11]	ENERGY STAR estimate from D&R International. Non-qualified estimates from 2003 AHAM Fact Book.
[12]	D&R International.
[13]	ENERGY STAR estimate from D&R International. Non-qualified estimates from 2003 AHAM Fact Book.
[14]	U.S. Environmental Protection Agency (EPA).

ENERGY STAR Qualified Clothes Washers

For more detailed assumptions on the energy consumption and savings numbers that appear below, please see the "Average Annual Energy and Water Consumption for ENERGY STAR Qualified and Non-Qualified Appliances" table on page 1.

Inputs

	Consumption		
	kWh	therms	gallons
Electric Water Heating			
ENERGY STAR qualified clothes washer average consumption per year	243		7,405
Non-qualified clothes washer average consumption per year	529		14,468
ENERGY STAR qualified clothes washer average consumption per cycle	0.62		18.89
Gas Water Heating			
ENERGY STAR qualified clothes washer average consumption per year	24.3	17	7,405
Non-qualified clothes washer average consumption per year	52.9	29	14,468

	Savings		
	kWh	therms	gallons
Electric Water Heating			
ENERGY STAR qualified clothes washer average savings per year	286		7,063
ENERGY STAR qualified clothes washer average savings per cycle	0.73		18.02
Gas Water Heating			
ENERGY STAR qualified clothes washer average savings per year	29	12	7,063
ENERGY STAR qualified clothes washer average savings per cycle	0.073	0.031	18.02

Text

Shower of Savings Text

		After Rounding
[1]	ENERGY STAR qualified clothes washer percentage energy savings (%)	54% 50%
	ENERGY STAR qualified clothes washer percentage water savings (%)	49% 40%
	ENERGY STAR qualified clothes washer average water savings (gallons/year)	7,063 7,000
[2]	ENERGY STAR qualified clothes washer numbers at 40% water savings (gallons/year)	5,787
[3]	Water savings laundry cycle equivalent at 40% water savings-Number of cycles (cycles/year)	306 300

Advanced Technologies Text

		After Rounding
[4]	ENERGY STAR qualified clothes washer annual energy bill savings-Low end of range	\$13 \$15
[5]	ENERGY STAR qualified clothes washer annual energy bill savings-High end of range	\$74 \$75
[6]	ENERGY STAR qualified clothes washer annual water bill savings-Low end of range	\$29 \$30
[7]	ENERGY STAR qualified clothes washer annual water bill savings-High end of range	\$55 \$55
	Total energy and water bill savings-Low end of range	\$42 \$45
	Total energy and water bill savings-High end of range	\$129 \$130

Sources and Assumptions

[1]	Rounded down to 40% to account for ENERGY STAR qualified top-loaders with agitators.
[2]	Water savings based on the assumption that an ENERGY STAR qualified washer uses exactly 40% less energy than an average non-qualified washer.
[3]	Amount of ENERGY STAR qualified washer cycles equivalent to the water savings of an ENERGY STAR qualified washer that uses exactly 40% less energy than an average non-qualified washer.
[4]	Assumes gas water heating, 6 cents/kWh, 91 cents/therm and 392 cycles per year (DOE estimate for average cycles per year).
[5]	Assumes electric water heating, 14 cents/kWh and 728 cycles per year (14 cycles per week).
[6]	Assumes .4158 cents/gallon and 392 cycles per year (DOE estimate for average cycles per year).
[7]	Assumes .4158 cents/gallon and 728 cycles per year (14 cycles per week).

ENERGY STAR Qualified Dishwashers

For more detailed assumptions on the energy consumption and savings numbers that appear below, please see the "Average Annual Energy and Water Consumption for ENERGY STAR Qualified and Non-Qualified Appliances" table on page 1.

Inputs

	Consumption		
	kWh	therms	gallons
Electric Water Heating			
ENERGY STAR qualified dishwasher average consumption per year	341		1,075
Non-qualified dishwasher average consumption per year	413		1,935
Gas Water Heating			
ENERGY STAR qualified dishwasher average consumption per year	150	8	1,075
Non-qualified dishwasher average consumption per year	182	11	1,935

	Savings		
	kWh	therms	gallons
Electric Water Heating			
ENERGY STAR qualified dishwasher average savings per year	72		860
ENERGY STAR qualified dishwasher average savings per cycle	0.33		4
Gas Water Heating			
ENERGY STAR qualified dishwasher average savings per year	32	3	860
ENERGY STAR qualified dishwasher average savings per cycle	0.15	0.014	4

Text

[1]	ENERGY STAR qualified dishwasher market penetration	75%
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Save Energy and Water Text

	ENERGY STAR qualified dishwasher percentage water savings	44%
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	ENERGY STAR qualified clothes washer average water consumption (gallons/cycle)	18.89
[2]	Water savings laundry cycle equivalent-Number of cycles (cycles/year)	46

After Rounding		
[3]	ENERGY STAR qualified dishwasher annual energy bill savings-Low end of range	\$5
[4]	ENERGY STAR qualified dishwasher annual energy bill savings-High end of range	\$17
[5]	ENERGY STAR qualified dishwasher annual water bill savings-Low end of range	\$4
[6]	ENERGY STAR qualified dishwasher annual water bill savings-High end of range	\$6
	Total energy and water bill savings-Low end of range	\$8
	Total energy and water bill savings-High end of range	\$23

[7]	2003 dishwasher shipments	6,280,300
[8]	2005 dishwasher shipments (estimate)	6,405,906
[9]	Annual water savings if everyone who bought a new dishwasher in 2005 chose an ENERGY STAR qualified model (gallons/year)	5,509,079,160
[10]	Rose Bowl capacity (gallons)	84,375,000
[11]	Water savings-Number of times to fill the Rose Bowl each year	65

Sources and Assumptions

[1]	2004 D&R International sales data report.
[2]	Amount of ENERGY STAR qualified clothes washer cycles equivalent to the annual water savings of an ENERGY STAR qualified dishwasher.
[3]	Assumes gas water heating, 6 cents/kWh, 91 cents/therm and 215 cycles per year (DOE estimate for average cycles per year).
[4]	Assumes electric water heating, 14 cents/kWh and 362 cycles per year (7 cycles per week).
[5]	Assumes .4158 cents/gallon and 215 cycles per year (DOE estimate for average cycles per year).
[6]	Assumes .4158 cents/gallon and 365 cycles per year (7 cycles per week).
[7]	2004 Appliance Magazine's Portrait of the US Appliance Industry.
[8]	Estimate calculated by assuming a 1% increase in shipments in 2004 and 2005.
[9]	Calculated by multiplying average annual ENERGY STAR qualified dishwasher water savings of 860 gallons/year by row 9.
[10]	Official Rose Bowl Stadium Web site.
[11]	Row [9] divided by Row [10].

ENERGY STAR Qualified Refrigerators & Freezers

For more detailed assumptions on the energy consumption and savings numbers that appear below, please see the "Average Annual Energy and Water Consumption for ENERGY STAR Qualified and Non-Qualified Appliances" table on page 1.

Inputs

Product Type	Consumption kWh/year
ENERGY STAR qualified refrigerator	442
Non-qualified refrigerator	520
10-year-old refrigerator (model produced before 1993)	821
ENERGY STAR qualified freezer	400
Non-qualified freezer	444
10-year-old freezer (model produced before 1993)	590

Product Type	Savings kWh/year
ENERGY STAR qualified refrigerator	78
ENERGY STAR qualified refrigerator (compared to a model produced before 1993)	379
ENERGY STAR qualified freezer	44
ENERGY STAR qualified freezer (compared to a model produced before 1993)	190

Text

Refrigerators Text

		After Rounding
[1] ENERGY STAR qualified refrigerator annual energy bill savings (compared to a model produced before 1993)-Low end of range	\$23	\$20
[2] ENERGY STAR qualified refrigerators annual energy bill savings (compared to a model produced before 1993)-High end of range	\$53	\$55
ENERGY STAR qualified refrigerators percentage savings (compared to a model produced before 1993)	46%	50%
[3] 75 watt light bulb left on continuously energy consumption (kWh/year)	657	

Freezers Text

ENERGY STAR qualified freezer Savings (kWh/year)	44	
[4] Freezer life expectancy-High end of range (years)	16	
[5] ENERGY STAR qualified freezer lifetime energy savings (kWh)	704	
		After Rounding
[6] ENERGY STAR qualified freezer lifetime energy bill savings-Low end of range	\$42	\$40
[7] ENERGY STAR qualified freezer lifetime energy bill savings-Low end of range	\$99	\$100

Sources and Assumptions

[1] Assumes 6 cents/kWh.
[2] Assumes 14 cents/kWh.
[3] Assumes a 75 watt light bulb left on 24 hours per day for 365 days.
[4] Appliance Magazine's Portrait of the U.S. Appliance Industry.
[5] 44 kWh/year multiplied by 16 years.
[6] Assumes 6 cents/kWh.
[7] Assumes 14 cents/kWh.

ENERGY STAR® Qualified Appliance Savings Fact Sheets
Room Air Conditioners

ENERGY STAR Qualified Room Air Conditioners

For more detailed assumptions on the energy consumption and savings numbers that appear below, please see the "Average Annual Energy and Water Consumption for ENERGY STAR Qualified and Non-Qualified Appliances" table on page 1.

Inputs

	Consumption
Product Type	kWh/year
ENERGY STAR qualified room air conditioner	681
Non-qualified room air conditioner	754
10-year-old room air conditioner	838

	Savings
Product Type	kWh/year
ENERGY STAR qualified room air conditioner	73
ENERGY STAR qualified room air conditioner (compared to a 10-year-old model)	157

Text

ENERGY STAR qualified room air conditioner energy savings (compared to a 10-year-old model) (kWh/year)	157
ENERGY STAR qualified refrigerator energy consumption (kWh/year)	442

[1] Refrigerator-Months of consecutive use with ENERGY STAR qualified room air conditioner energy savings (months)	4
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		After Rounding
[2] ENERGY STAR qualified room air conditioner annual energy bill savings (compared to a 10-year-old model)-Low end of range	\$9	\$10
[3] ENERGY STAR qualified room air conditioner annual energy bill savings (compared to a 10-year-old model)-High end of range	\$22	\$22

Sources and Assumptions

[1]	Shows savings of an ENERGY STAR qualified room air conditioner in terms of the amount of months the energy savings could run an ENERGY STAR qualified refrigerator.
[2]	Assumes 6 cents/kWh.
[3]	Assumes 14 cents/kWh.